REMARKS

Reconsideration and allowance are respectfully requested.

Claims 1-20 are pending. The breadth of the claims is not changed because the amendment of claims 1, 4, 7 and 9-13 is directed to correcting informalities that by their nature (e.g., typographical errors) clarify and do not limit the originally intended scope of protection. For example, claims 14-16 are added as dependent claims because claims 10 and 13 originally listed exemplary compounds or conditions that were not recited as positive limitations. The new claims 14-16 are narrower in scope than the original claims 10 and 13. New claim 17 is a combination of original claims 1-2.

Claims 1 and 12 were objected to as allegedly informal. They are amended to correct the informalities. Withdrawal of the objection is requested.

35 U.S.C. 112 – Definiteness

Claims 7, 9-11 and 13 were rejected under Section 112, second paragraph, as being allegedly "indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Applicants traverse.

Antecedent basis is corrected by amending claims 7, 9-11 and 13. Dependent claims are added to correct claims 1 and 13. The Examiner's suggestion with respect to correction of claim 13 is adopted.

Other typographical mistakes are corrected in the claims.

Applicants request withdrawal of the Section 112, second paragraph, rejection because the pending claims are clear and definite.

35 U.S.C. 102 – Novelty

A claim is anticipated only if each and every limitation as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is claimed. See *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1-4, 6 and 11-12 were rejected under Section 102(b) as allegedly anticipated by Tamamura et al. (U.S. Patent 4,559,112 hereinafter "Tamamura"). Applicants traverse because of the structural differences present between their invention and the Tamamura electrode.

Tamamura discloses an electrode with a substrate that is coated with a metallic conducting backing layer and then an insulating polymer layer (col. 3). In Applicants' electrode, on the other hand, the use of an insulating polymer layer is optional. Even when such insulating polymer layer is used, it is applied to the substrate (e.g., glass) and the metallic or conducting backing layer is then applied on the insulating polymer layer (see claim 2).

Furthermore, the conducting polymer layer of Tamamura is formed directly on the insulating polymer layer. In contrast, the conducting polymer layer is formed on the conducting metallic or conducting backing layer in Applicants' invention. Figure 1 of Tamamura clearly shows the presence of an insulating polymer layer between the conducting polymer layer and the metallic backing layer. Applicants' claim 1, however, requires electrochemically coating the conducting polymer directly on the metallic or conducting backing layer.

Therefore, it is clear that Tamamura does not teach every claim limitation present in Applicants' claims. Tamamura discloses the presence of an insulating polymer layer that is between the conducting polymer layer and the metallic conducting backing layer. On the other hand, an insulating polymer layer is optional in Applicants' invention. When present, however, the insulating polymer layer in Applicants' invention is between the substrate and the metallic or conducting backing layer.

Withdrawal of the Section 102 rejection is requested because all limitations of the claimed invention are not disclosed by the cited reference.

35 U.S.C. 103 – Nonobviousness

To establish a case of prima facie obviousness, all of the claim limitations must be taught or suggested by the prior art. See M.P.E.P. § 2143.03. Obviousness can only be established by combining or modifying the prior art teachings to produce the claimed

invention if there is some teaching, suggestion, or motivation to do so found in either the references themselves or in the knowledge generally available to a person of ordinary skill in the art. See, e.g., *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Jones*, 21 USPQ2d 1941, 1943-44 (Fed. Cir. 1992). It is well established that the mere fact that references can be combined does not render the resultant combination obvious unless the desirability of that combination is also taught or suggested by the prior art. See *In re Mills*, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990). Thus, even if all elements of the claimed invention were known, this is not sufficient by itself to establish a prima facie case of obviousness without some evidence that one would have been motivated to combine those teachings in the manner proposed by the Examiner. See *Ex parte Levengood*, 28 USPQ2d 1300, 1302 (B.P.A.I. 1993).

Evidence of the teaching, suggestion or motivation to combine or to modify references may come explicitly from statements in the prior art, the knowledge of a person of ordinary skill in the art or the nature of the problem to be solved, or may be implicit from the prior art as a whole rather than expressly stated in a reference. See *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999); *In re Kotzab*, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000). Rigorous application of this requirement is the best defense against the subtle, but powerful, attraction of an obviousness analysis based on hindsight. See *Dembiczak* at 1617. Whether shown explicitly or implicitly, however, broad conclusory statements standing alone are not evidence because the showing must be clear and particular. See *id.*

Claims 5 and 8-10 were rejected under Section 103(a) as allegedly unpatentable over Tamamura in view of Nakama et al. (U.S. Patent 5,126,017 hereinafter "Nakama"). Applicants traverse.

As discussed above, Tamamura discloses an insulating polymer layer provided on the metallic layer. The conducting polymer is then coated on the insulating polymer layer. When the concentration of the conducting polymer electrode increases, the entire surface becomes conducting. Applicants' claimed invention, however, does not rely on enhancing conductivity by making the insulating polymer layer conductive. Instead, their invention focuses on providing a catalytically active electrode for oxidation of alcohols

with a very specific construction. The citation of Nakama does not remedy the failure of Tamamura to disclose an electrode with the conducting polymer directly coated on the metallic or conducting backing layer (i.e., without an insulating polymer layer between). In this respect, assuming for the sake of argument that the conducting backing layers are functionally equivalent, this does not address the lack of contact between Tamamura's metallic conducting backing layer and its conducting polymer as required by claim 1.

Claim 7 was rejected under Section 103(a) as allegedly unpatentable over Tamamura. Applicants traverse.

Tamamura was discussed above. There is no showing in the prior art or other evidence provided in the Action that concentration is a "result-effective variable" as alleged on page 11 of the Action. Moreover, even if this allegation is assumed for the sake of argument to have been proved, this does not address the lack of contact between Tamamura's metallic conducting backing layer and its conducting polymer as required by claim 1.

Claim 13 was rejected under Section 103(a) as allegedly unpatentable over Tamamura in view of JP 2-18423 (hereinafter "JP"). Applicants traverse.

There is no showing in the prior art or other evidence that one of ordinary skill in the art would have been motivated to modify Tamamura's process of electrochemically coating by using a different solvent system (e.g., JP's dissolving aniline in water and a mineral acid). Moreover, even if this modification is assumed for the sake of argument to be obvious, this does not address the lack of contact between Tamamura's metallic conducting backing layer and its conducting polymer as required by claim 1.

Finally, there is no teaching or suggestion in Tamamura, Nakama, or JP for an electrically conducting polymer electrode with specific catalytic activity for oxidation of alcohols. In neither Nakama nor JP is there any mention of an insulating polymer layer at all. Therefore, there would have been no motivation to read the three references together. Tamamura, in particular, focuses specifically on solving a problem associated with insulating polymer coated electrode substrates.

Withdrawal of the Section 103 rejections is requested because the invention as claimed would not have been obvious to a person of ordinary skill in the art at the time it was made.

Conclusion

Having fully responded to all of the pending objections and rejections contained in this Office Action, Applicants submit that the claims are in condition for allowance and earnestly solicit an early Notice to that effect. The Examiner is invited to contact the undersigned if any further information is required.

Respectfully submitted,

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